



Radiological Program Overview

Hunters Point Shipyard
USEPA – James Ricks
April 6, 2005

Historical Information



- Full site radiological history and information presented in Historical Radiological Assessment (HRA)
 - Finalized in August 2004
 - Years of research and archive review
 - Radiological Affairs Support Office (RASO) Lead Technical Support

HRA Guide to Finding



- Summary Guide prepared at time of HRA release
 - Context and HRA General Description
 - Radiation Source Review
 - Shipyard activities
 - Gamma Radiography
 - Radiation Detection Instrument Calibration
 - Operation Crossroads
 - Naval Radiological Defense Laboratory

HRA Impacted Sites Review



882 Sites reviewed for potential use, storage, or disposal of radiological materials

792 no impact

58 require further investigation and/or cleanup

26 pending release for unrestricted use

4 U.S. Army Corps of Engineers (FUDs)

3 released for unrestricted use

HRA Impacted Sites



- Non-radiological work (CERCLA) may be affected if located in impacted area.**
- HRA may require substantial time and money to prepare.**
- Activities under the Naval Nuclear Propulsion Program (NNPP) contained in Volume I, and Volume II for General Radioactive Materials.**
- Identifies potentially radiologically impacted sites.**
 - An impacted site has had potential for radiological contamination based on use or storage of radiological isotopes or other site historical information.**
 - Does not mean that site will have contamination, only potential for it.**

HRA Results



- HRA results (Volume II).

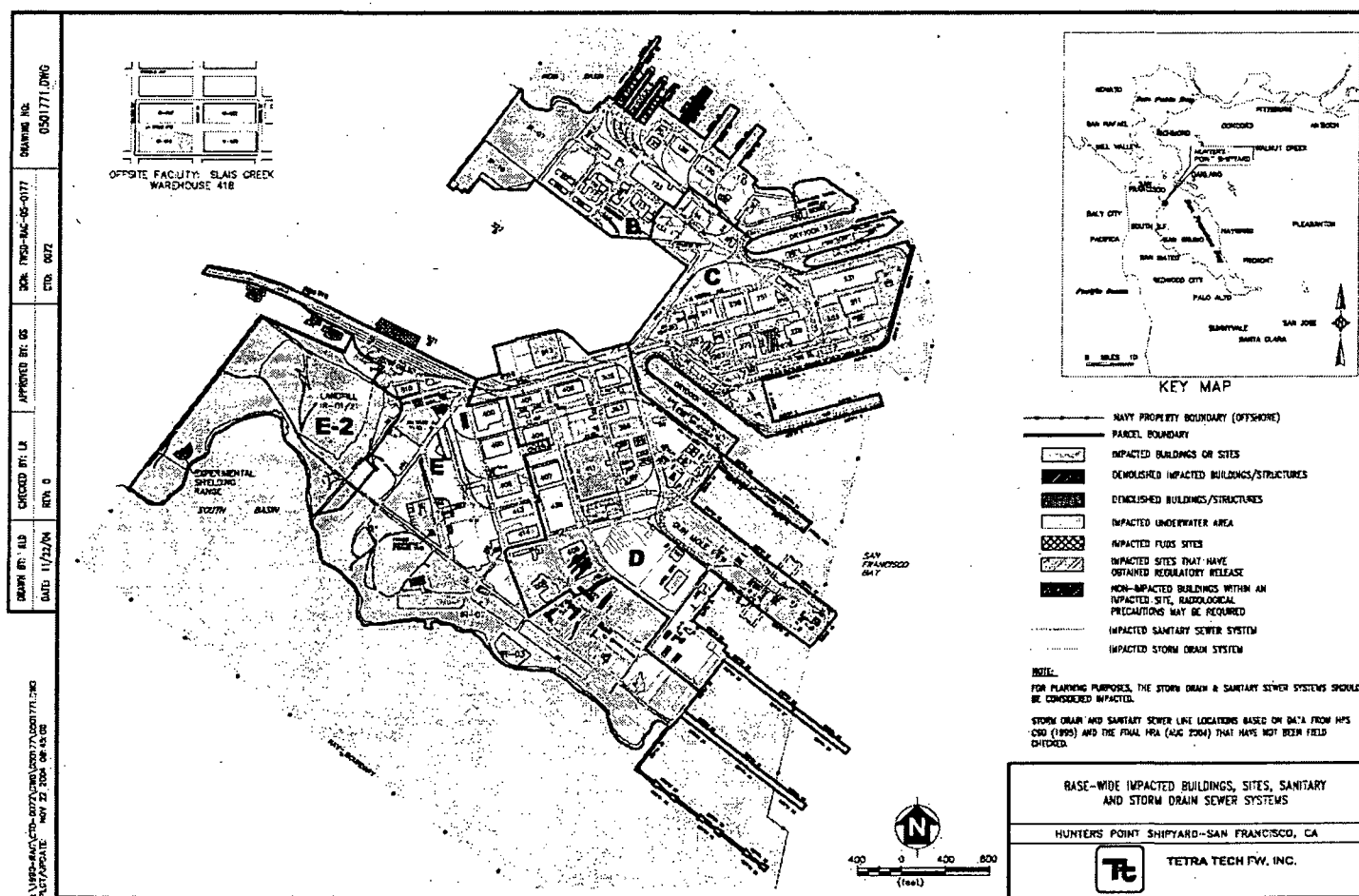
- 91 impacted sites listed.

- Small sites such as former building foundation footprint areas.
 - Large multi-story structures.
 - Fill areas that may contain dials, gauges, deck markers, or sandblast grit (sand blasting was used to decontaminate ship structures).
 - Extensive systems such as the 14 miles of underground storm and sanitary piping systems.

HRA – Impacted Sites



Base map showing radiologically impacted sites.



Radiological Survey Schedule (December 6, 2004) - BCR Meeting

Radiological Clearance Process (Site)



- Scoping Survey
(Use MARSSIM guidance for surveys, usually Class III survey if contamination is not anticipated)
- Characterization Survey
(Performed if contamination is found, determine type and extent of contamination, usually a MARSSIM Class I)
- Remediation
(Performed if contamination found, typical source removal and contamination surveys)
- Final Site Survey (FSS)
(Initial survey is designed to be used as FSS if no contamination is identified)

Radiological Clearance Strategy (Site)



- Prepare radiological survey work plan for each impacted site.
- Conduct field radiological surveys compliant with Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM).
- Delineate and remediate all source areas.
- Conduct final radiological surveys verifying clean-up.
- Prepare Final Status Survey (FSS) report for each site.

Radiological Clearance Strategy (Site)



- Obtain regulatory sign-off on FSS.
 - USEPA (open land areas, risk-based).
 - Cal. DHS (structures and open areas via DTSC, dose-based).
- For HPS, prepared a base-wide radiological action memorandum to support the ROD.
- Ideal situation will allow for removal and survey of all areas for free release.
 - Some circumstances may require alternative negotiations due to difficulties in achieving a free release.

Radiological Clearance Process (Parcel)



- All impacted sites/buildings require regulatory approval of Final Site Survey (FSS) Approval
 - Buildings/Structures FSS are typically reviewed/approved by Cal DHS
 - Open space FSS (locations of former buildings) are typically reviewed/approved by USEPA
- Parcel Radiological Completion Report is prepared for parcel, ideally prior to the ROD

Radiological Survey Planning



(1 year Look Ahead)

- Survey Focus on Parcel B & D *-ROD 2007*
 - Next Parcels scheduled for transfer *-ROD 2007*
 - Timing will be tight *-ROD 2007*

- TCRA's

- Shoreline Area*
 - Metal Reef and Metal Slag
 - IR-02 Northwest and Central
 - PCB hotspots removal

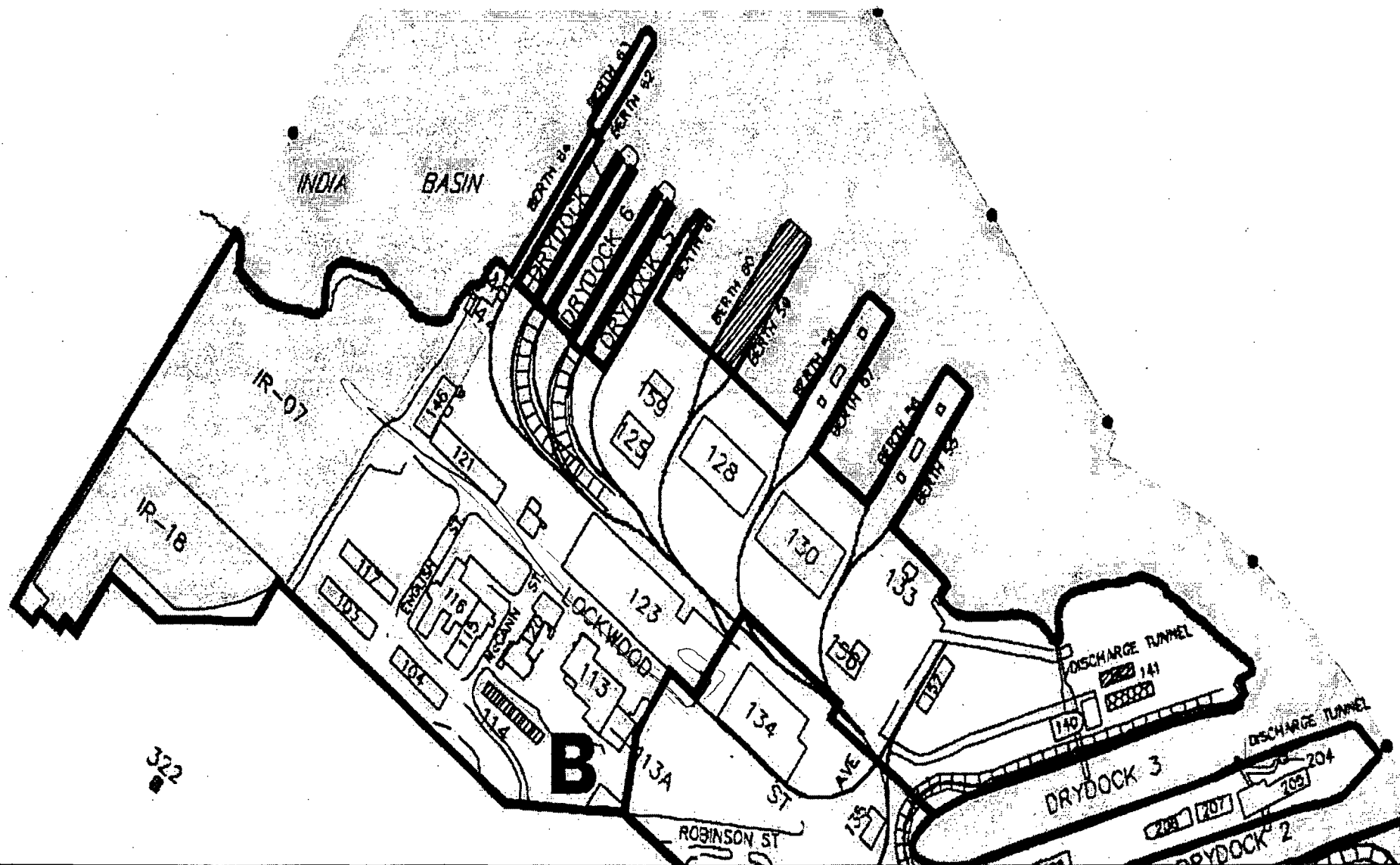
- Not radiologically driven
- In Impacted area

Parcel B Overview



- 14 Parcel B sites listed in HRA
 - 8 buildings
 - 3 open space sites
 - 3 dry docks
 - water parts of dry docks 5,6,7 will be grouped with Parcel F sites
- Base-wide sites included on parcel
 - Sanitary sewer piping
 - Storm water piping
 - Ships' berths
 - water parts will be grouped with Parcel F sites

Parcel B Impacted Sites Map



Radiochemical Survey Schedule, September 8, 2004, HFS/DOE Meeting

Parcel B Radiological Surveys FY05



Phase V

- 4 sites already surveyed; reports to be prepared in FY05:

- Bldg. 103

- Bldg. 113

- Bldg. 113A

- Bldg. 130

- Partial surveys

- Dry dock 6 (did not include pump system)

- Building 146 (class III done, more information found, class 1 planned)

and 114

*BASEWIDE
RADIOLOGICAL
SURVEY
PLAN
accepting survey
started 10/6/04
detailed*

Parcel B Radiological Surveys FY05



- 10 sites scheduled for survey and reporting in FY05:
 - Bldg. 114 site
 - Bldg. 140 & discharge tunnel
 - Bldg. 142
 - Bldg. 146
 - Bldg. 157
 - IR-07
 - IR-18
 - Dry docks 5,6,7

Parcel B Radiological Surveys FY05



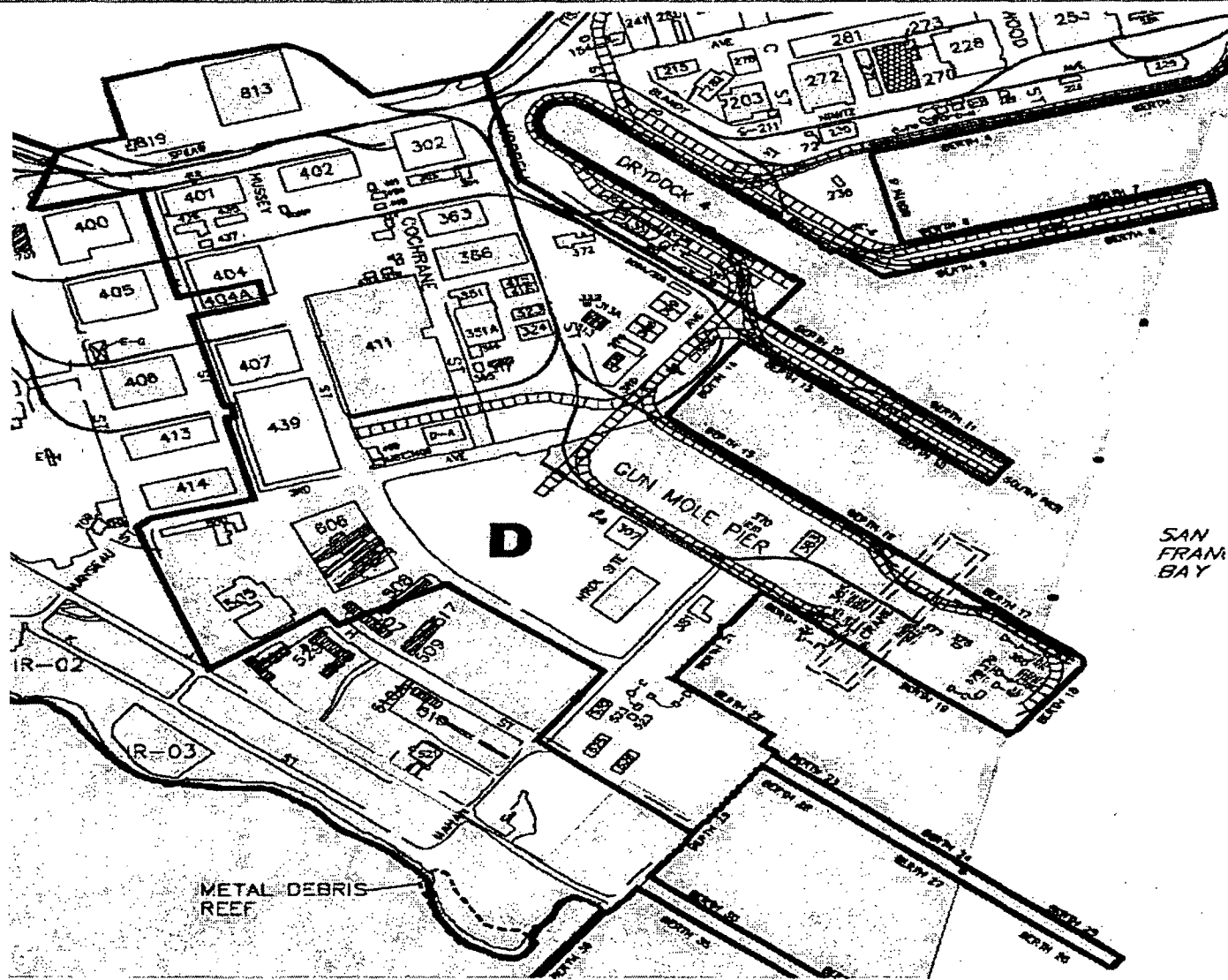
- Storm/Sanitary Sewers
 - Partial completion of surveys in FY05 and some remediation if necessary
- Ships' Berths
 - Above water portions

Parcel D Overview



- 19 Parcel D sites listed in HRA
 - 12 buildings
 - 7 open space sites
- Base-wide sites included on parcel
 - Sanitary sewer piping
 - Storm water piping
 - Ships' berths
 - water parts will be grouped with Parcel F sites

Parcel D Impacted Sites Map



Original Survey of the Coast, 1850-1860, 1864

Parcel D Radiological Surveys FY05



- 11 sites already surveyed; reports to be prepared in FY05:
 - Bldg. 274
 - Bldg. 313 site
 - Bldg. 313A site
 - Bldg. 317 site
 - Bldg. 322 site
 - Bldg. 351
 - Bldg. 365
 - Bldg. 383 area
 - Bldg. 411
 - former NRDL site (Mahan St)
 - Bldg. 819

Parcel D Radiological Surveys FY05



- 2 sites scheduled for remediation and reporting in FY05:
 - Bldg. 351A (contamination already remediated in piping and crawlspace; remediation will be performed on outside back steps in FY05)
 - Bldg. 364 (contamination already remediated on Bldg. Surfaces, piping in crawlspace; Room 107 remediation and final site survey to be performed in FY05)

Parcel D Radiological Surveys FY05



- Work delayed at 2 sites due to access issues
 - Bldg. 366 remediation (artist relocation issue)
 - Bldg. 503 site (a.k.a radioactive laundry bldg. site, below current Bldg. 606, SFPD)

Parcel D Radiological Surveys FY05



- 4 sites scheduled for survey and reporting
 - Bldg. 408
 - Bldg. 500 – *Parcel E (NROL STANAGE)*
 - Bldg. 813
 - gun mole pier (characterization survey only FY05, report to follow)

Parcel D Radiological Surveys FY05



- Storm/Sanitary Sewers
 - Partial completion of surveys and some remediation in FY05
- Ships' Berths
 - Above water portions

Additional Notes and Qualifiers



- A base-wide work plan describes the approach being followed to conduct surveys, characterizations, remediations, and final site survey reports
- Majority of work sites are conducted under the base-wide work plan using a Task Specific Plan (TSP) to detail individual site requirements
- Some sites or areas may require a separate individual work plan due to complexity or special issues (e.g. sewers)

Additional Notes and Qualifiers



- Listed FY05 work projections are reasonable but aggressive, some projected work may be pushed past the end of FY05
- Work will continue past FY05 to complete all parcel projects (both B & D) and prepare FSS for all impacted sites
- Other survey and remediation work will also occur on other parcels (C & E) during FY05 but primary schedule focus will be parcel B & D
- A FSS report for each impacted site will be submitted for regulatory review/approval

* Final Site Survey